



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D4021-9
Job Sheet 168359



Part No: D4021-9

Job Qty: 350 ea

Part Name: Bushing



Part Weight: 0 lbs

Status: Scheduled

Priority: High

Job Created: 11/13/17

Job Tracking No:

Due Date: 11/22/17

Created By: Mario Poulin

Type: SOLD

Description:

Note: DWG REV B SHEET 3 IPP REV:A NEW ISSUE 09-11-23 JLM VERIFIED BY:DD IPP Rev:B as per dwg
REV.A DD 10.02.22 verified by:EC IPP Rev:C as per dwg revB DD 10.04.20 verified by:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	350 Ea		11/21/17	0.00	0.00	Start Up Machining		FK- 17-11-30
100	Hardinge	350 pcs		11/22/17	0.00	19.02	Hardinge		FK- 17-11-30
120	QC	350 pcs		11/22/17	0.00	0.00	QC8		21/12/2017
130	Packaging	350 pcs		11/22/17	0.00	0.00	Packaging3		D.M.L 17-12-1
140	QC21-SA	350 Ea		11/22/17	0.00	0.00	QC21		

Part Op 100 - TURN AS PER FOLIO FA 868 AND DWG D4021 DWG REV: _____ FOLIO REV: _____
Descriptions: ***MACHINE TO .375" MAX OD ***
130 - LOCATION: WA004

DAS
21
9-59
DEC 01 2017

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	M304R0.375	29	6	0	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Bushing	0.191Inches + 0.005 - 0.001	0.196 0.190	Diameter	
2	Bushing	0.380Inches ± 0.030	0.410 0.350		
3	Bushing	0.750Inches ± 0.030	0.780 0.720		

Plex 11/13/17 2:33 PM dart.poulin.mario

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

DART
AEROSPACE
S015896



Bushing

PART NO:
Revision:
Operation:
Change No:

D4021 - 9

Start up Operation

Mfg Date: 11/30/17
Job No: 168359

DISPOSITION

AGAINST DEPARTMENT/PROCESS

Work ☐
Scrap ☐
Re-as-is ☐
Reworked ☐

Skid-tube ☐
Machining ☐
Thermoforming ☐
Large Fab ☐

Cross tube ☐
Small Fab ☐
Finishing ☐
Composite ☐

Water Jet ☐
Prod. Eng. Coord. ☐
Rec/Store/Packaging ☐
Supplier ☐

Engineering ☐
Quality ☐
Other ☐

QTY Effective :

Disposition

Completed By

Lead hand / Supervisor
Approval Verification

QC / QA Coordinator
Approval

FAULT CATEGORY

☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong
☐ Set-up	☐ Folio/Program	☐ Outside Dimensions
☐ BOM/Route	☐ Grain	☐ Over/Under tolerance
☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect
☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing
☐ Contamination	☐ Out of Sequence	☐ Part Moved
☐ Countersink	☐ Off-set	☐ Drawing
☐ Cut Too Short	☐ Mislabeled	☐ Finish
☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread
☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence

Marks/Chatter

Substation
Past Expiry Date
Misidentified

Process Improvement
Manufacturing Process
Past Due

OTHER :



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200

Inventory

Operation Number	Operation	Serial Number	Job	Quantity	Weight	Original Serial Number	Location	Container	Status	Added	Special Comments	Label	Supplier	Change No
Part Number: M304R0.375 Revision: 304 Round Bar 0.375														
100	Receive Ft	S015895	168359	0 ft	0		MAT028		Stock	11/30/2017	Issue Container			
Operation Totals:		1		0	0									
Part Totals:		1		0	0									
Totals:		1		0	0									

Plex 1/8/2018 10:53 AM Dart.Boucher.Sylvie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																	
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																	
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																	
Large Fab ☐	Composite ☐	Supplier ☐																																																																		
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																																																																
Description Work Order Deviation		Disposition		Completed By																																																																
				Lead hand / Supervisor Approval Verification																																																																
				QC / QA Coordinator Approval																																																																
Root Cause <table style="width:100%; border: none;"> <tr> <td style="border: none;">Environment ☐</td> <td style="border: none;">No Re-verification ☐</td> </tr> <tr> <td style="border: none;">Design ☐</td> <td style="border: none;">Operator ☐</td> </tr> <tr> <td style="border: none;">Doc/Data ☐</td> <td style="border: none;">Offset/Setup ☐</td> </tr> <tr> <td style="border: none;">Equip/Tooling ☐</td> <td style="border: none;">Supplier ☐</td> </tr> <tr> <td style="border: none;">Handling/Pre ☐</td> <td style="border: none;">Training ☐</td> </tr> <tr> <td style="border: none;">Material ☐</td> <td style="border: none;">Use for Testing ☐</td> </tr> <tr> <td style="border: none;">Internal Transport ☐</td> <td style="border: none;">Poor Information ☐</td> </tr> <tr> <td style="border: none;">Tribal Knowledge ☐</td> <td style="border: none;">Rushing ☐</td> </tr> <tr> <td style="border: none;">LOA ☐</td> <td style="border: none;">Product Improvement ☐</td> </tr> <tr> <td style="border: none;">Substation ☐</td> <td style="border: none;">Process Improvement ☐</td> </tr> <tr> <td style="border: none;">Past Expiry Date ☐</td> <td style="border: none;">Manufacturing Process ☐</td> </tr> <tr> <td style="border: none;">Misidentified ☐</td> <td style="border: none;">Past Due ☐</td> </tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr> <td style="border: none;">Pressure/Forced ☐</td> <td style="border: none;">Temperature/Cure ☐</td> <td style="border: none;">Power Loss/Surge ☐</td> <td style="border: none;">Positioned Wrong ☐</td> </tr> <tr> <td style="border: none;">Bending ☐</td> <td style="border: none;">Set-up ☐</td> <td style="border: none;">Folio/Program ☐</td> <td style="border: none;">Outside Dimensions ☐</td> </tr> <tr> <td style="border: none;">Centre Not Concentric ☐</td> <td style="border: none;">BOM/Route ☐</td> <td style="border: none;">Grain ☐</td> <td style="border: none;">Over/Under tolerance ☐</td> </tr> <tr> <td style="border: none;">Cracks ☐</td> <td style="border: none;">Broken/Damage/Defect ☐</td> <td style="border: none;">Weld ☐</td> <td style="border: none;">Part Incorrect ☐</td> </tr> <tr> <td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td> <td style="border: none;">Inspection Incomplete/Unqualified ☐</td> <td style="border: none;">Wrong Stock Pulled ☐</td> <td style="border: none;">Part Lost/Missing ☐</td> </tr> <tr> <td style="border: none;">Cuffs ☐</td> <td style="border: none;">Contamination ☐</td> <td style="border: none;">Out of Sequence ☐</td> <td style="border: none;">Part Moved ☐</td> </tr> <tr> <td style="border: none;">Crushing ☐</td> <td style="border: none;">Countersink ☐</td> <td style="border: none;">Off-set ☐</td> <td style="border: none;">Drawing ☐</td> </tr> <tr> <td style="border: none;">Heat Treat ☐</td> <td style="border: none;">Cut Too Short ☐</td> <td style="border: none;">Mislabeled ☐</td> <td style="border: none;">Finish ☐</td> </tr> <tr> <td style="border: none;">Wave/Twist in Tube ☐</td> <td style="border: none;">Instructions Incomplete/Unclear ☐</td> <td style="border: none;">Fit/Function ☐</td> <td style="border: none;">Misread ☐</td> </tr> <tr> <td style="border: none;">Marks/Chatter ☐</td> <td style="border: none;">Drill Holes ☐</td> <td style="border: none;">Misaligned/off center ☐</td> <td style="border: none;">Turning Sequence ☐</td> </tr> </table>			Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐																																																																			
Design ☐	Operator ☐																																																																			
Doc/Data ☐	Offset/Setup ☐																																																																			
Equip/Tooling ☐	Supplier ☐																																																																			
Handling/Pre ☐	Training ☐																																																																			
Material ☐	Use for Testing ☐																																																																			
Internal Transport ☐	Poor Information ☐																																																																			
Tribal Knowledge ☐	Rushing ☐																																																																			
LOA ☐	Product Improvement ☐																																																																			
Substation ☐	Process Improvement ☐																																																																			
Past Expiry Date ☐	Manufacturing Process ☐																																																																			
Misidentified ☐	Past Due ☐																																																																			
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																	
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																	
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																	
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																	
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																	
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																	
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																	
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																	
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																	
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																	
OTHER :																																																																				